Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the subject application.

Listing of Claims:

1. (Previously presented) A system for transmitting and receiving TDM control data in a TDM communication network, comprising:

a single master control source for providing the TDM control data; and,

one or more slave TDM multiplexors within the TDM communications network, communicating via a TDM signal, each of the slave TDM multiplexors including

(i) a transmitter component for accepting the TDM control data from the master control source, and inserting the TDM control data into the TDM signal;

(ii) a receiver component for extracting the TDM control data in the TDM signal and passing the TDM control data to a local control processor; and,

(iii) a bridging component for passing TDM control data along to the next TDM multiplexor, independent of the local control processor.

2. (Previously presented) A system according to claim 1, wherein the transmitter component of each of the one or more slave TDM multiplexors (i) receives the TDM control data from the associated receiver component, (ii) inserts the TDM control data into the TDM signal and (iii) transmits the TDM signal to one or more TDM multiplexors.

3. (Previously presented) A system according to claim 1, wherein the transmitter component of each of the one or more slave TDM multiplexors inserts the TDM control data into one or more time slots of the TDM signal, and the associated receiver component extracts the TDM control data from the corresponding one or more time slots of the TDM signal.

4. (Previously presented) A system according to claim 1, wherein the transmitter

component of each of the one or more slave TDM multiplexors inserts the TDM control data into a fraction of a time slot of the TDM signal, and the associated receiver component extracts the one or more control signals from the corresponding fraction of the corresponding time slot of the TDM signal.

5. (original) A system according to claim 1, wherein the TDM communications network includes one or more T1 communications links.

6. (original) A system according to claim 1, wherein the TDM communications network includes one or more E1 communications links.

7. (original) A system according to claim 1, wherein the TDM communications network is coupled to a second TDM communications network via a secondary communications link, so as to create a sub-network to the TDM communications network.

8. (original) A system according to claim 7, wherein the secondary communications link includes an Ethernet communications link.

9. (original) A system according to claim 7, wherein the secondary communications link includes an RS-485 communications link.

10. (original) A system according to claim 7, wherein the secondary communications link includes an RS-232 communications link.

11. (Previously presented) A system according to claim 1, wherein the TDM communication network operates in a half duplex mode.

12. (original) A system according to claim 1, wherein a first TDM multiplexor operates as a master station, and the remaining TDM multiplexors operate as slave stations, such that the slave

stations transmit only when stimulated by the master station, and only one slave station transmits at any given time.

13. (Previously presented) A system according to claim 1, wherein the control source includes an Ethernet communications port for communicating with the master control source via an Ethernet protocol.

14. (Previously presented) A system according to claim 1, wherein the control source includes an RS-232 communications port for communicating with the master control source via an RS-232 protocol.

15. (Previously presented) A system according to claim 1, wherein the control source includes an RS-485 communications port for communicating with the master control source via an RS-485 protocol.

16. (Previously presented) A system according to claim 1, wherein the receiver component (i) performs a serial to parallel conversion of the TDM control data, (ii) bit shifts the TDM control data so as to form one or more TDM control data octets, and (iii) buffers the TDM control data octets for use by the control processor.

17. (Previously presented) A system according to claim 1, wherein the transmitter component (i) buffers TDM control data octets from the master control source, (ii) performs a parallel to serial conversion of the TDM control data, and (iii) inserts the TDM control data into predetermined data positions of the TDM signal.

18. (original) A system according to claim 1, wherein the TDM communications network includes terminal multiplexors.

19. (original) A system according to claim 1, wherein the TDM communications network

includes drop-insert multiplexors.

20. (Previously Presented) A method of distributing TDM control data in a TDM communications network, from a master control source to two or more TDM multiplexors within the TDM communications network, comprising:

receiving one or more TDM control signals from the master control source;

inserting the one or more TDM control signals into the TDM signal at the first TDM multiplexor; and,

extracting the TDM control signals from the TDM signal at each of the remaining TDM multiplexors, and providing the TDM control signals to an associated TDM multiplexor control processor.

21. (Previously presented) A method according to claim 20, further including

(i) receiving the one or more TDM control signals from the receive interface device at each of the remaining TDM multiplexors;

(ii) inserting the one or more TDM control signals into the TDM signal; and,

(iii) transmitting the TDM signal to one or more TDM multiplexors.